Local Farmers Utilize Integrated Pest Management

Pest control is one of the most important components in the production of food and fiber. This is especially true in our warm, humid Gulf Coast environment. For more than twenty-five years farmers in North Florida have employed Integrated Pest Management (IPM) techniques to effectively manage pest problems in cotton, peanuts, and soybeans.

IPM is an environmentally sound way of protecting crops from pests such as insects, weeds, diseases, and nematodes. IPM integrates a combination of pest prevention and control methods. Methods include: cultural practices, natural enemies, resistant crop varieties, physical/mechanical methods, genetic engineering, and pesticides. Pesticides are de-emphasized and are used only when necessary.

Field monitoring, or scouting, is an important component of an IPM program. Trained individuals scout crop fields on a routine basis. They locate, identify, and count both pest and beneficial organisms. If pest numbers exceed a certain threshold, then supplemental control measures, such as pesticides may be necessary. The goal of IPM is not to completely eradicate pests, but to maintain populations below the economic injury level.

With IPM, pest control is much more complicated than just counting “bugs” and spraying. All factors must be taken into consideration. These include pest life cycles, the growth stage of the crop, environmental conditions, soil type, crop variety, previous crop history, anticipated yield, cost of control measures, and expected return on investment. A pest management strategy must be developed to fit each specific situation at a particular point in time.

IPM has many obvious advantages. Pesticides are used in a way to cause least harm to man and the environment. The development of pest resistance to pesticides is prevented or delayed. Also, farmers control pests in the most cost efficient manner.

Most farmers hire professional crop consultants or seasonal scouts to implement IPM on their farms. However, a farmer can learn the techniques himself if he has the time to scout fields on a timely basis. The Extension Service offers seminars and scout training schools each year on the latest IPM methods.

Cotton has traditionally been one of the most pesticide intensive crops grown. A survey conducted by the University of Florida in 1996 showed that more than 80 percent of Florida cotton growers performed IPM scouting activities on a scheduled basis. With scouting, growers routinely save a minimum of three insecticide applications per season while maintaining or increasing yields. This one practice alone has resulted in over $35 per acre increased net profit.

Scouting combined with other methods, such as new genetically engineered varieties, has further reduced the amount of pesticides applied to Florida cotton. Last season growers averaged less than one insecticide application, compared to more than 12 just a few years ago.

IPM is not just for farmers of field crops. It is important to note that many instances of pollution and contamination of water supplies result not from agricultural use of pesticides, but from use by urban populations. A recent national survey confirmed the presence of diazinon residues in 7,230 of 23,227 samples of sewage effluent being released from municipalities into surface water supplies. These residues resulted from urban homeowner use and disposal of this pesticide. Everyone needs to do their part to insure that pesticides are used in a proper and safe manner.

IPM programs have been developed for controlling pests in vegetables, fruits, ornamentals, turf, on livestock, and in the home, school, and indoor environment. The methods for some sites may not yet be as fully developed as those for cotton. However, techniques are available to help you control pests in the most effective, environmentally friendly way possible. For more information on Integrated Pest Management, contact your local Cooperative Extension Office.

Mike Donahoe is County Extension Director and Pest/Row Crops Agent for Santa Rosa County.